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Development (1947) Department.

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Dated 14 Oct. 4

[Despatch Abstract.]

Education- Technical- All India Council of Technical Education- Second meeting held at Bangalore in May 1947- Report- Papers Recorded.

No. 1187-C2/46. Department of Industries & Commerc
Madras, 9th June 1947.

From

Sri Rao Bahadur N.M. Adyanthaya, B.Sc. (Edin),
Joint Director of Industries & Commerce.

To

The Secretary to Government, Development Department,
Madras.

Sir,

Sub: All India Council for Technical Education- Second Meeting of the Council at Bangalore- Report of the Joint Director of Industries and Commerce-
Ref: Government Memorandum No. 48658-DI/47-1 dated the 26th May 1947-

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I attended the Second meeting of the All India Council for Technical Education held at Bangalore on the 29th and 30th of May 1947 under the Chairmanship of Mr. N.R. Sircar.

The meeting was fully represented and about 53 members from all over India attended.

After the Address of Welcome by Sir A. Ramaswami Mudaliar, Dewan of Mysore and the Chairman's reply the items of the Agenda were gone through; and offical report, when received from the Secretary of the Council, will be submitted to Government.

It was mentioned during the debate that some Provinces had not replied to the Government of India's references relating to Technical Education and the institution of All-India Diplomas. The representatives of Provincial Governments were requested to persuade their Governments to expedite their replies. I explained that in an important matter like the development of Technical Education and the institution of All India Diplomas very careful thought had to be bestowed and the various interests concerned namely the industrialists and the Government Departments had to be consulted and that such delays as might have occurred in the case of Provincial Governments were inevitable. I also pointed out that the Madras Government had already started 7 Polytechnics and Diplomas of a high standard are granted by a Technological Diploma Examination Board consisting of highly qualified technicians. Such being the case, while co-operating with the Council they would not submit to any control from outside. I also told the meeting that the development of Technical Education was a Provincial responsibility and as such the institution of All India Boards of Studies, Regional Committees and Co ordinating Committees to control Provincial Institutions would be directly opposed to the principle of Provincial Autonomy. I, therefore, pleased that the Council and the Government of India may await the new set up in the various administrations of this country before proceeding further in the matter. Sir A Lakshmanaswami Mudaliar explained that it was not the intention to control Provincial Institutions. The main object of the Council and the Government of India in setting up the various committees and Boards was to institute a common standard and to upgrade such of the institutions as would join the All India Scheme.

The meeting then passed a number of resolutions sponsored by the Co-ordinating Committee of the Council the chief of which are:--

1. "This Committee is of opinion that in view of the introduction of All-India Diplomas, Certificates and Higher Diplomas, it is desirable that the Inter-University Board should be acquainted with the proposals and that the Board should be requested to consider the desirability of reviewing the position of the Technical Education in the Universities. The Committee resoves that a Memorandum be prepared and sent up to the Inter-University Board with the request that it may consider the d esirability of appointing a committee with which a small committee of the All-India Council for Technical Education may Co-operate in drawing up the general principles to be observed

in regard to technical education for the degree courses of universities."

2. "While the Council are gratified to note that the Central Government have generally accepted in principle the recommendations made by the Council at its first meeting, they feel that immediate steps should be taken to implement the recommendations in regard to

(a) immediate establishment of the Higher Technical Institutions in the Eastern and the Western Zones,
(b) taking such preliminary steps as will facilitate the early establishment of the remaining two Higher Technical Institutions in the North and the South.
(c) Setting up of the four proposed Regional Committees.

3. "That in view of the urgent need for producing technical personnel of a high standard for the economic development of the country as a whole, this committee is of the opinion that suitable financial grant may be given directly from the Central Government to existing institutions on the recommendations of the All India Council for Technical Education."

4. "In view of the need for establishing a minimum efficient standard for higher technical education and for ensuring adequate supply of trained personnel for the economic and insutrial development of the country and for developing the highest form of technical education all over the country, this Council is of the opinion that higher technical education should be under the directive of the Council both for the promotion of efficiency of standard and for efficient maintenance of higher technical institutions and with this end, in view, the Council recommends that necessary funds be provided by the Central Government for the next five years at least."

The Council also passed a resolution that grants should be made only to those institutions which fulfil the following conditions.

(a) The Institution must adopt a minimum standard salary scale for teachers- the scale to be laid down by the Council after taking into consideration the recommandations of the Central Advisory Board of Education and of the Pay Commission in this matter.

(b) The Institution must maintain a minimum standard of education as may be liad down by the Council.

(c) In the matter of appointment of teaching staff th institution must arrange to associate with Selection Committees independent experts in the subjects concerned to the satisfaction of the Council.

(d) The Institution must agree to periodical inspections by the Council's authorised representative and render him every assistance to enable him to report whether the conditions laid above are being complied with."

As regards the selection of site for the Southern Higher Technological Institute, a Committee of three consisting of Dr. S. A. Lakshmanaswami Mudaliar, Dr. Ghosh of the Indian Institute of Science and Dr. Deshpande of Travancore was formed to visit the Southern States and Provinces and recommend a suitable site in consultation with the Governments concerned.

Sd.
Joint Director of Industries
and Commerce.

True Copy

Draft proceedings of the second meeting of the All India Council for Technical Education held at Bangalore on the 29th and the 30th May, 1947.

The second meeting of the All India Council for Technical Education was held at Bangalore on Thursday and Firday, May 29 and 30, 1947, under the Chairmanship of Mr. N.R. Sarker. Dewan Bahadur Sir A. Ramaswamy Mudaliar, the Dewan of Mysore, opened the meeting.

The following members were present:

1. Mr. N.R. Sarker. — Chairman.

2. Sir John Sargent C.I.E., M.A.D.Litt,
Educational Adviser to the Govt. of India

Departments of Government of India;

3. Prof. J.N. Mukherjee,
representing the Agriculture Department,

4. Mr. J.B. Shearer,
representing the Finance Department,

5. Dr. J.N. Ray,
representing the Finance Department. of
and Supplies.

6. Mr. S.N. Roy,
Representing Labour Department.

7. Mr. M.S. Murthi,
representing Railway Department, Railway Board.

8. Brig. H. Williams,
representing Defence Department.

9. Mr. D.D. Mazumdar,
representing Department of Works, Mines & Power.

10. Dr. B.C. Guha,
representing Food Department.

Council of State:

11. The Hon'ble Khan Bahadur Keramat Ali

Legislative Assembly (Central)

12. Pandit Govind Malaviya

13. Miss Maniben Kara

14. Sri S.T. Adityan

15. Sardar Narayanrao Genpatrao Vinchoorkar.

Provincial Governments.

16. Sri Rao Bahadur Adyanthia,
representing Government of Madras.

17, Mr. D.S. Joshi,
representing Government of Bombay.

18, The Hon'ble Mr. S.M. Hussain,
Minister for Education, representing
Government of Bengal.

19. Dr. K.R. Krishnaswamy,
representing Government of Bihar.

20. The Hon'ble Pir Ellahi Bux,
Minister for Education,
representing Government of Sind.

21. Mr. M.W. Abbasi,
representing Government of U.P.

22. Dr. V.S. Jha,
representing Government of Central Provinces and Berar.

Indian States:

23. Syed Ali Akbar,
representing Hyderabad, Deccan State

24. Mr. Kasturi Raj Chetty,
representing Mysore State.

25. Mr. J.J. Anukulam,
(representative for Capt. H.B. Richardson)
representing the Central India States,
Holdar Government.

26. Major D.L. Deshpande,
representing Travancore and Chchin.
(The Madras States).

Industry, Commerce and Labour

27. Mr. A Farfington,
representing Associated Chamber of Commerce of India.

28. Dr. A. Waheed,
representing Federation of Muslim Chambers of Commerce
and Industry.

29. Mr. G.V. Apte,
representing the Employers' Federation of India.

30. Mr. Chakkrai Chettiar,
representing the All-India Tr

31. Vithal Chowdhury,
representing the All India Trade Union Congress.

32. Prof. B.N. Banerjee,
representing the Indian Federation of Labour.

33. Mr. M.A. Khan,
representing the Indian Federation of Labour.

34. Mr. S. Guruswami,
representing the All-India Railwaymen's Federation.

Central Advisory Board of Education.

35. Sardar Bhadur Sardar Bujjal Singh.

nter University Board, India:

36. Sir A. Lakshmanaswamy Mudaliar.

Association of Principals of Technical Institutions (India).

37. Mr. P.N. Joshi.

Institutions of Engineers.

38. Mr. N.V. Modak.

Indian Indiitutions of Engineers.

38. Mr. N.V. Modak.

Indian Institute of Architecture.

39. Mr. H.N. Dallas.

National Planning Committee.

40. Sir J.C. Ghosh.

Secretary Dr. S.R. Sen Gupta.

e following members were unable to attend:

1. Mr. K.K. Chettur,
representative of the Govt. of India,
Commerce Department.

2. Sir S.S. Bhatnagar,
representing the Council of Scientific & Industrial
Research.

3. Mr. ShH.Y. Oulsnam,
representative of the Govt. of India,
Department of Health.

4, Mr. J.M. Patel,
Secretary, Development Board,
Government of India.

5. Mr. M.I. Rahim,
representative of the Communications
Department, Government of India.

6. Mr. G.M. McKelvie,
representative of the Transport Department,
Government of India.

7. The Hon'ble Rai Bahadur S.K.Das,
representative, Council of State.

8. The Hon'ble Minister for Industries,
Assam, representative of the Government of Assam

9. Mr. Md. Ismail Khan,
representative of the Legislative Assembly.

10. Sri Bijayanand Patnaik, M.L.A.,
representative of the Government of Orissa.

11. The representative of the Government of Punjab,

12. Director of Industries, N.W.F.P.,
representative of the Govt. of N.W.F.P.

13. Rajpriya Dinshaw R. Daboo, Development Member,
Baroda Government, Baroda, representative of the
South Western Indian States.

14. J.A. Murray,
representative of the Associated Chambers of Commerce.

15. Mr. M.A. Master,
representative of the All India
Organisation of Industrial Employers.

16. Dr. K.A. Hamied,
representative of the All-India
Organisation of Industria l Employers.

17. Mr. K.D. Jalan,
representative of the Federation of Indian Chamber of Commerc
and Industries.

18. Sir Frederic Stones, O.B.E.,
representative of the ~~All-India Organisation of Industrial Employers.~~
Employers Federation of India.

representative of the Federation of
Indian Chambers of Commerce and Industry.

20. Mr. S.M. Azam,
representative of the Central Advisory Board of
Education .

21. Dr. Syamaprasad Mukherjee,
representative of the Inter-University
Board.

22. Mr. W.W. Wood,
representative of the Association of Principals of
Technical Institutions (India).

23. Mr.C.E. Preston,
representative of the Institution of Engineers (India)

24. Prof. K.T. Shan, representative of the
National Planning Committee.

25. Sir Fazal Ibrahim Rahimtoola, C.I.E., B.A.,
a nominee of the Government of India.

26. Mr. G.L. Mehta, a nominee of the Government of India.

The following were also present as advisers:--

1. Col Beeching,
Advisor to the representative of H.E.H. the
Nizam's Government

2. Dr. D.M.Sen,
Deputy Secretary,Education Department,
Adviser to the representative of Govt. of India.

3. Dr. S. Dutta,
Adviser tothe representatives of Govt. of Bengal.

In opening the session, Sir A. Ramaswamy Mudaliar, Dewan of Mysore, extended on behalf of His Highness the Maharaja of Mysore a cordial welcome to the Chairman and Members of the Council. He assured the Council of the fullest cooperation of the Mysore State in the main task before them, namely, the devising of ways and means to meet the shortage of adequately trained tecchnical personnel to take up managerial and supervisory posts.

Sir Ramaswamy believed that the efforts of the Government of India to organise and improve existing technical education and to establish new Higher Technical Institutions were primarily directed towards ensuring to industries an adequate supply of trained technologists who could act as supervisors and superintendents of skilled and semi-skilled men. The Central Government should establish, as quickly as possible, the proposed Higher Technical Institutions. Though there might be some difficulty in finding the proper personnel to staff these Higher Technical Institutions he believed that the difficulty could be overcome if all sources local as well as foreign were tapped properly. In this great task, he said, the narrow consideration of nationality must be set aside and the best talents secured for the Institutions from wherever possible.

He hoped that the All India Diploma and Certificate schemes initiated by the Council would quickly gain recognition and the diplomas and certificates be accepted as hallmarks of a sound technical education. He was sure that the Council would exercise the greatest care in the proper selection of examiners

and in the conduct of the examinations for the award of these diplomas and certificates.

Sir Ramaswamy stressed the need for establishing economic security and the importance of raising the standard of living of the vast masses of the Indian people, for on these would rest the foundations of true independance. The Council by promoting technical education would play an important role in the solution of these vital problems.

(The full text of Sir Ramaswamy Mudaliar's Speech appears in AnnexureI.)

In his reply to Sir Ramaswamy Mudaliar's address of welcome, Mr. N.R. Sarkar, the Chairman, thanked Hos Highness the Maharaja of Mysore for his kind invitation to the member of the Council to hold the meeting at Bangalore and for the cordial welcome extended to them. The Mysore State, with its numerous technical activities was the proper venue for this meeting.

Science, he said, apparently played two conflicting roles in the modern world- one paving the way to death and destruction and the other alleviating the miseries of mankind. The only way to reconcile these two conflicting roles of science lay in harnessing the power of science to the material development of humanity and thereby raising the general standard of living. Mr. Sarker emphasised that the standard of living should be up graded considerably an undeveloped country like India and that the existence of a large body of men with specialised knowledge and technical skill was an essential pre-requisite for such development. He pointed out with numerous illustrations, that the economic development of a nation depended to a large extent on the expansion of facilities for technical education.

Though the Indian Scientists had made brilliant contributions in the field of research, their activites were not properly correlated with the needs of the country's industries and that was perhaps in the main due to the inadequate facilities for technical education. The realisation of this fact had led the Government to appoint an ad hoc committee to consider the development of Higher Technical Education in India. This Committee had stressed the urgency of establishing at least four Higher Technical Institutions in different parts of the country and the recommendations of this Committee had been endorsed by the Council itself. He was, however, greatly disappointed at the slow pace at which the Government were proceeding with the establishment of these Institutions.

The All-India Council for Technical Education, which has been set up by the Government of India to advise them on all matters connected with the development of Higher Technical Education, endorsed the recommendations of the above Committee though at one time the Council was confronted with the view that no institution should be started without first conducting and completing a detailed survey to ascertain precisely the requirements of the country as a whole and to ensure that the expanstion of facilities for technical education should be in conformity with the requirements of the country, so that the balance of demand and supply of trained technicians could be maintained without the least fear of the supply exceeding the demand. He felt however, that the facilities for technical education in India were so meagre that the establishment of a few more Higher Technical Institutions, before the survey was completed, could never lead to an excessive output of trained technicians.

Finally, he said that at present India was passing through a transitional period during which serious political and constitutional problems threatened to retard her progress in the field of technical activities. The problem of nationalisation or otherwise of industries was engaging the attention of the country. Irrespective of whether nationalisation of industries was undertaken on a comprehensive scale or on a selective basis covering only k

basis covering only key industries, the fact remained that the creation of a large body of trained technical personnel was a bas ic necessity. He appealed to the Government of India to bestir themselves and take necessary steps for building up quickly facilities for higher technical education.

(The full text of Mr. Sarker's address is given in Annexure II).

The Chairman then invited the members to consider the items on the agenda (Annexure XIV).

While considering the agenda, the Council had before them the considered views and recommendations of the Coordinating Committee as embodied in the draft proceedings of its third meeting.

Item I.

To report that the proceedings of the first meeting of the All India Council for Technical Education held at New Delhi from 30th April to 2nd May, 1946, were confirmed by circulation to members. The proceedings have been printed

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It was reported that the proceedings of the first meeting of the Council were confirmed by circulation to members and copies printed.

Item II.

To report the present membership of the Council.

Resolved that the list of members be recorded (AnnexureIII).

Item III.

To report the action taken by the Government of India in regard to recommendations made by the All-India Council for Technical Education at its first meeting and to consider matters arising in connection therewith. (Annexure IV).

The Council considered at length the action taken by the Government of India on the recommendations made by the Council at its first meeting and by the Co-ordinating Committee at their first and second meetings with particular reference to

(A) the establishment of the Higher Technical Institutions
(B) the strengthening of existing Technical Institutions
(C) the establishment of the Regional Committees and
(D) the implementation of the Craftsmen Training Scheme for Industry.

(A) <u>The establishment of Higher Technical Institutions</u>.

The Council were pleased to note that the Government had decided to establish the Eastern and the Western Higher Technical Institutions within the first quinquennium, but were dissatisfied with the progress which Government had made towards impelementing their decision. They felt that within the year which had elapsed since the Council's recommendations were made it should have been possible to acquire suitable sites and recruit the necessary planning staff. Pandit Govind Malaviya said that he understood that there were legal difficulties in the way of the acquisition of the Kancharapara site selected for the Eastern

Higher Technical Institution, a selection to which he was opposed right from the beginning. The Council was assured by the Honible Minister for Education, Bengal, that there would be no legal difficulty in the acquisition of the site in question and the transaction could be completed within a month.

Sir John Sargent explained what had been done in the matter of establishing these Institutions and the difficulties which had arisen. On the advice of the Co-ordinating Committee of the Council, Government had tentatively considered locating the Eastern Institution at the Kancharapara site. This was a valuable site indeed but it was discovered that there was a proposal for establishing a T.B. Sanatorium there. He was glad to be able to report that as a result of prolonged negotiations, the Government of Bengal had now agreed to consider the removal of the Sanatorium to enable the Central Government to establish their institution at this site. As regards the site for the Western Higher Technical Institution, a number of sites near Bombay had been inspected with the valuable assistance of Mr. Modak, a member of the Council, and it was hoped that a decision regarding the final selection of a site would be reached in the near future.

As regards securing of the key staff for the proposed Institutions, a number of private enquiries through Government and other sources including Embassies had been made and even though such eminent persons as Sir Aruthur Eleming, Dr. Millikan of the California Institute of Technology and Dr. Compton of the Massachuset Institute of Technology, etc., are interesting themselves in the matter, Government were finding it extremely difficult at the moment to secure the services of the right people on reasoble salaries. The demand for technical specialists was so great in their own countries that it was extremely difficult to get men with adequate qualifications to accept engagements abroad. There was also the fact that owing to the present unsettled conditions in India, foreigners were somewhat hesitant about taking posts in this country.

It was suggested by Pandit Govind Malaviya that in view of these difficulties the Government might try to establish one Institution only with the Delhi Polytechnic and its nucleus instead of proceeding with two Institutions in the East and the West. It was however, pointed out in reply that the part the Delhi Polytechnic was expected to play in the field of technical education in the country was quite different from that of the proposed Higher Technical Institutions and apart from that considerable difficulty was being experienced in the matter of securing a site for the Delhi Polytechnic which would be adequate for its development as at present contemplated. Pandit Malaviya then moved the following resolution:--

"In view of the difficulties in the way of establishing Higher Technical Institutions, Government should instead of starting new Institutions convert the Delhi Polytechnic into a Higher Technical Institution." The Council, however, was of the opinion that this resolution would be tantamount to a reversal of the Council's previous decision, i.e. that the G. Government should proceed with the establishment of four Higher Technical Institutions as recommended by the Sarker Committee. The resolution when put to vote was lost, only one member voting in favour of it.

(B) Strengthening of Existing Technical Institutions.

It was explained to the Council that the Government had made a nominal budget provision of Rs. 20 lacks for the purpose of strengthening existing Technical Institutions on the recommendation of the Council. Some members though that this provision was inadequate.

It was explained to the satisfaction of the Council that it was not the fault of the Government if action had not yet been taken for actual payment of grants in as much as Government

had made budget provision without any prejudice to expenditure sanction and were awaiting the Council's recommendations in this behalf.

(C) Establishment of the Regional Committee.

The Council noted that Government had addressed t dial and State Governments soliciting their cooperation in the matter of setting up of Regional Committees of the Council. The Council also noted that as a preliminary to the formation of the Regional Committees, the Central Government had invited the views of the Provincial and State Governments on the functions and constitution of the proposed Regional Committees and the demarcation of the various regions, and had also apprised them of the functions of the other two types of the Committees of the Council, namely, the Boards of Studies and the Co-ordinating Committee, so as to obviate any misunders-tanding in regard to the nature and scope of the activities of the Council and its Committees. The Council was disappointed to note that so far only four Provincial Governments and a few States had given their tentative views. The Council felt that even though the views of the Provincial Governments had not been received, it should urge upon the Government the necessity for the early formation of the Regional Committees.

The Council then proceeded to consider the following resolution submitted by the Co-ordinating Committee for adoption by the Council.

Resolution:--

"While the Council are gratified to note that the Central Government have generally accepted in principle the recommendations of the Council, at its first meeting, they feel that immediate steps should be taken to implement the recommendations in regard to

(a) immediate establishment of the Higher Technical Institutions in the Eastern and the Western Zones,
(b) taking such preliminary steps as would facilitate the early establishment of the remaining two Higher Technical Institutions in the North and the South,
(c) and setting up of the four proposed Regional Committees".

The Hon'ble Minister for Education, Sind, thought that in view of the present constitutional uncertainty it would be more realistic to have five regional committees instead of four as proposed by the Co-ordinating Committee, and, therefore it was necessary to amend paragraph (c) of the above resolution. It was finally decided that the word "FOUR" should be omitted from Clause (c) of the resolution.

The resolution was then put to vote clause by clause Clause (B) and the amended clause (c) were carried unanimously and the clause (a) with only one member dissenting. The resolution as adopted reads as follows:--

"While the Council are gratified to note that the Central Government have generally accepted in principle the recommendations of the Council at its first meeting, they feel that immediate steps should be taken to implement the recommendations in regard to

(a) immediate establishment of the Higher Technical Institutions in the Eastern and the Western zones.

(b) taking such preliminary steps as will facilitate the early establishment of the remaining two Higher Technical Institutions in the North and the South and

(c) setting up of the proposed Regional Committees."

(D) Implementation of the Craftsman Training Scheme.

The Council discussed at length the progress made in the matter of implementing the recommendations of the Advisory Committee on Technical Training regarding the introduction of the scheme for the training and apprenticeship of Craftsmen for Industry a scheme for which had been endorsed by the Council at its first meeting. It was reported that the Department of Labour, Government of India had addressed the Provincial Governments in regard to the establishment of Central Institutions for the training of Instructors for technical and vocational trainingand had also apprised the Provincial Governments and major States of the desirability of using some of the existing Technical Training Centres for the training of craftsmen for Industry.

It was reported that the Department of Labour was pre-occupied with the task of reconditioning demobilised personnel for resettlement, a responsibility which the Government were committed to undertake. Members representing Labour interests on the Council however expressed their dissatisfaction that little had been done by the Government so far. It was reported that the delay in establishing the Central Institute for training Instructors was due to the extreme scarcity of experienced Instructors. There was also the difficulty of securing equipment and machinery. It was further explained that industry was not enthusiastic in cooperating with the Government for the implementation of the Scheme and also that there was considerable unemployment amongst trained skilled and semi-skilled labour.

The pay which the skilled artisans were getting was considered to be most inadequate. In this connection some members thought that the Council should take up with the Government of India the question of the nationalisation of industry if industry was not prepared to co-operate in full with the training scheme. It was thought, however, that this was so big a question that it will require more thought than the Council could give in the time at their disposal. The Labour members of the Council, however, wished it to be recorded that they were dissatisfied with the progress made by the Government in the matter of instituting technical training schemes for the training of craftsmen and also in the matter of providing facilities for part-time instruction to men already engaged in industry. The representative of the Labour Department informed the Council that Government had accepted the scheme in principle and were waiting for the replies from the Provincial Governments before proceeding further in the matter.

Miss Maniben Kara enquired whether the Council should not consider the question of the training of Indian Seamen for Marine Engineering and Navigation, as the Shipping Industry in the country was going to be a very important one in the near future. The Council thought that this matter might well be discussed under item VII.

Item IV.

To receive and consider the minutes of the first, the second and the third meeting of the Co-ordinating Committee of the All-India Council for Technical Education held on August 6/7th, 1946February 5, 1947 and May 27/28th, 1947, respectively. (Annexure V, VI and VII)

To meet the wishes of the majority of members, this item was considered on the second day of the meeting.

Arising out of the proceedings of the first meeting of the Co-ordinating Committee, Mr. Apte enquired whether the Sarker Committee was still in existence or if it had been dissolved. Sir John Sargent replied that since the Sarker Committee had performed the task assigned to it and that in view of the establishment of the All India Council for Technical Education, the above Committee had been dissolved.

Arising out of the decision of the Co-ordinating Committee in the matter of the Power Engineering Department, Bangalore (Item 14, page 10 of the proceedings of the first meeting of the Co-ordinating Committee) Mr. Apte enquired whether it would be possible for the Council to know what action the Indian Institute of Science had taken on the comments on the Power Engineering Scheme which might have been communicated to the Institute by the Government Sir J. C. Ghoash explained that there was a Standing Advisory Committee consisting of experts drawn from all over India to ad vise the Indian Institute of Science in this matter and that this Advisory Committee was to meet at least once every year in Bangalore. He added that Department of Education, of the Government of India, would shortly appoint a representative of their own on this Advisory Committee and he assured the Council that if they desired to have representation on the Advisory Committee, the Council that if they desired to have representation on the Advisory Committee, the Council of the Institute would probably agree to give such representation.

It was resolved that the Council of the Indian Institute of Science be requested to have a representative of the All India Council for Technical Education on its Advisory Committee on Power Engineering.

Mr. Apte though that the Co-ordinating Committee was wrong in suggesting that the Higher Technical Institutions should concern themselves with the training of Laboratory Technicians and suggested that the words "At the Beginning" in paragraph 4, page 2, last but one line of the proceedings of the second meeting of the Co-ordinating Committee whould be deleted. The Council d id not accept Mr. Apte's suggestion.

The Chairman then asked whether the members had any comments to make on any other points arising out of the minutes of the three meetings of the Co-ordinating Committee. No member had nay further comments to make except the representative of the Bombay Government who thought that the Council should have been given more time in which to consider the proceedings of the third meeting of the Co-ordinating Committee since these contained recommendations leading to the important decisions which the Council had adopted.

Item V.

To receive and consider a note setting out the action taken to constitute the Regional Committees of the All-India Council for Technical Education (Annexure VIII)

As previously mentioned the Council expressed their dissatisfaction at the fact that only a few of the Provincial and State Governments had communicated their views on the question of formation of the Regional Committees.

The representative of the U.P. Government reported that the U.P Government accepted the proposal for the establishment of Regional Committees and the functions assigned to it as stated in the Government of India letter in its entirety. He expressed his Government's regret that they had been unable to send a reply in time.

The representative of the Mysore Government referred to the speech made earlier by the Dewan and said that the Government of Mysore also accepted the proposal for the establishment of the Regional Committees in its entirety.

The representative of the Madras Government said that in the opinion of his Government, the Council was going too fast, in setting up Boards and now on setting up the Regional Comiittees. His Government had their own Technological Boards, they were not in favour of the Council setting up similar Boards. The Madras Government would welcome advice and cooperation but would not agree to submit to control or supervision by the Council.

The Hon'ble Minister for Education, Sind, felt that the Co-ordinating Committee's proposal on the demarcation of regions and the number of regions was unrealistic in view of the impending constitutional changes. He moved the following resolution which was seconded by Dr. Waheed:-

Resolution:

As the demarcation of regions proposed by the Co-ordinating Committee appears to have little relation to geographical, economical or political considerations and is unwieldly, it is proposed that the country should be divided into five regions as below instead of four as proposed by the Co-ordinating Committee.

(a) Northern Region: It will consist of the following:--N.W.P.P. The Punjab, Sind, Baluchistan, Jammu & Kashmir State.

(b) Central Region:- It will consist of the following:-- U.P. Bihar, Delhi, Ajmer-Merwara and the States of Rajputana.

(C) Eastern Region: It will consist of the following:- Bengal, Assam, & Orissa.

(d) Southern Region: It will consist of the following:- Madras, Hyderabad State, Travancore-Cochin & other Southern Indian States.

(e) Western Region:- It will consist of the following: Bombay, C.P., Berar and the States of Western India and Central India;

and that the Regional Committees be constituted accordingly and that Higher Technical Institutions be set up in each of the five regions.

After some discussion and in view of the Council's decision under Item I of Agenda, the mover withdrew the resolution on the understanding that the views expressed in the resolution would be communicated to the Central and Provincial Governments etc.

There was also considerable discussion on the proposed composition of the Regional Committees. The representatives of Labour thought that labour organisations were being given too little representation and Technical Institutions too much. It was decided that Labour should have two representatives on the Regional Committees instead of one but for the time being there was no need to name the acfredited Labour Organisations.

It was further decided that all non-official members of the All-India Council for Technical Education in their respective Regions should be ex-officio members of the Regional Committees. Dr. Waheed moved that in so far as Northern Region was concerned, Technical Institutions should not have four representatives on the Regional Committee. The motion was lost.

Some members thought that the first Chairman of the Regional Committees should not be appointed by the Government but be elected by the Committee members themselves. A motion to this effect when put to vote was also lost.

The Council decided that the Central Government should address the Provincial Governments in continuation of their previous communication conveying the views expressed by the Council as embodied in the above decisions.

Item VI (a)

To report the progress made in regard to the survey of Technical Institutions in the country (Annexure IX).

In resolving to record the Interim Report on the survey of the existing facilities for technical education, it was decided that an easily readable and non-technical report should be produced and that the Education Department should publish an annual directory on facilities for technical education. For this purpose the Department should request the Institutions to keep them posted with up-to-date information.

Item VI. (b).

To receive the reports of the Visiting Committees appointed to inspect some of the Technical Institutions in the country and to consider the recommendations of the Co-ordinting Committee arising out of the Visiting Committee's reports. (Reports and Recommendations will be published separately).

Some members of the Council were disappointed to note that the Co-ordinating Committee had appointed a scrutinising Committee to consider the reports of the Visiting Committees and to submit their recommendations to the Council and thought that the Council should accept forthwith the recommendations of the Visiting Committees and request the Government to make the necessary financial grant to the Institutiions conerned. It was explained that the recommendations of the Visiting Committees were not uniform in character, nor had all recommendations been made with due regard either to the existing facilities or past records of the Institutions concerned. The Council were satisfied that a careful scrutiny of the Visiting Committees recommendations was necessary. Sri Adityan, then moved the following resolution:--

"The Council note with regret that till now necessary steps have not been completed to upgrade the existing Technical Institutions as resolved, by the Council and approved by the Government and the Council recommend that the Co-ordinating Committee whould expedite this work "

is reolsution was accepted.

The Hon'ble Minister for Education, Sind, moved the following resolution:--

"It is proposed that additional Visiting Committees as shown below be appointed to inspect forthwith the Technical Institutions in Northern and Eastern Regions; these Visiting Committees be constituted as follows:---

1) Northern Region-- Sir S.S. Bhatnagar, Kt. F.R.S.
Dr. A. Waheed
Brig H. Williams.q,

2) Eastern Region- Sir S.S. Bhatnagar, Kt. F.R.
Hon'ble Mr. Kerqmat Ali
Mr. C.E. Preston.

The above resolution, which was seconded by Dr. A. Waheed was withdrawn by the mover when he was informed that a visiting committee under Sir S.S. Bhatnagar had already been appointed to inspect and report on the Foreman Christian College, Lahore and the N.E.D. College, Karachi.

On the question, whether the Central Government should make direct grants to provincial technical institutions and whether such grants should be subject to any conditions, Sir Lakshmanswami Mudaliar invited the attention of the members of the Council to the relevant paragraphs on pages 14-20 of the proceedings of the theird meeting of the Co-ordinating Committee, specially to the resolutions on pages 18-20. He thought that there was nothing irregular about the Central Government giving direct grants for strengthening non-governmental provincial institutions, even thou education was not a Central subject. Sir Lakshmanaswami said that he would have occasion to refer to the resolution on page 19 at a subsequent stage. In the meantime he thought that since the Council had accepted the principle that the Central Governmen should assume financial responsibilities for strengthening some o

of the existing non-governmental provincial institutuions, it was the duty of the Council to see that every Institution to which a grant was given should fulfil certain general conditions such as a minimum standard of education, the recruitment of efficient staff and periodical inspections by the Council's authorised representatives to enable the latter to report whether the conditions laid down in full at the time of giving the grant were being complied with by the Institution. It was explained that in the matter of the appointment of teaching staff it was not intended that new Selection Committees for appointments should in all cases be set up with the approval of the Council but that the Council should be satisfied where such Selection Committees already existed as to the rules and regulations pertaining to recruitment of staff.

There was a prolonged discussion about the question whether the grant for strengthening non-governmental provincial institutions should be given by the Central Government direct to the Institutions or through the Provincial Governments. Some members thought that Provincial Governments should bear a proportionate share of the expenditure involved in the improvement of non-governmental Institutions in their areas so that the Provincial Governments might realise that they too had an important responsibility in this respect. The representative of the Finance Department explained that according to the present policy of Government, the Central Government accepted special responsibilities for the Higher Technical Institutions but the provision of Rs. 20 lacks in the current year's Budget did not imply that the Central Government would necessarily assume the responsibility of financing a number of Provincial Technical Institutions also. He referred to the paucity of funds available in the Central Exchequer and thought that the Central Government might not be prepared to accept the responsibility for generally strengthening existing Institutions which might mean a financial commitment ranging from Rupees 10 to 20 crores.. The representative of the Finance Department agreed that if a body such as the All India Council for Technical Education passed a resolution to the effect that the Central Government should take up the responsibility for strengthening the Provincial non-governmental technical Institutio also, the Government would no doubt reconsider the present policy in so far as it related to technical education. He mentioned, however, that it was possible that the Central Governments grants to Provinces for their development schemes might have to be reduced since the Government had not unlimited funds at their disposal.

The following two resolutions of the Co-ordinating Committee (on pages 18-20) of the proceedings of the 3rd meeting) were then placed before the Council:

Resolution I.

"That in view of the urgent need for producing technical personnel of a high standard for the economic development of the country as a whole, this Council is of the opinion that suitable financial grants may be given directly from the Central Government to existing Institutions on the recommendations of the All-India Council for Technical Education."

ResolutionII.

"That grants should be made only to these Institution who fulfil the following conditions:

(a) The Institution must adopt a minimum standard salary scale for teachers, the scale to be laid down by the Council after taking into consideration the recommendation of the Central Advisory Board of Education and of the Pay Commission in this matter.

(b) The Institution must maintain a minimum standard of education as may be laid down by the Council.

(c) In the matter of appointment of teaching staff, the Institution must arrange to associate with Selection Committee independent experts in the subjects concerned to the satisfaction of the Council.

(d) The Institution must agree to periodical inspections by the Council's authorised representatives and render them every assistance to enable them to report whether the conditions laid down above are being complied with."

It was the unanimous view of the Council that there was nothing in any of these resolutions which ran counter to the present constitution and that the Provincial Governments need have no apprehension in their minds that the Council or the Central Government were encroaching on their autonomy or rights and privileges. The Council accordingly adopted both the above resolutions.

The Council agreed with the Co-ordinating Committee that grants made by the Central Government to any Institution on the recommendation of the Council should be in the nature of block grants for specific purposes and should not normally lapse with the close of the financial year, it being clerly understood that the Institutions would not be permitted to swell their funds with unspent balances.

The Council agreed with the Co-ordinating Committee that more Visiting Committees should be appointed to inspect and make recommendations for the improvement of the four other Technological Institutions mentioned in the proceedings of the Co-ordinating Committee, and that the Scrutinising Committee should submit their recommendations before the 31st of August.

It was resolved that the Co-ordinating Committee be authorised to recommend on behalf of the All India Council for Technical Education suitable financial grants to the Institutions concerned after they have examined the report of the Scrutinising Committees.

Sir AlL. Mudaliar then invited the attention of the Council to the following resolution which the Co-ordinating Committee had framed for the consideration of the Council.

Resolution:-

"In view of the need for establishing a minimum efficient standard for higher technical education and for ensuring an adequate supply of trained personnel for the economic and industrial development of the country and for developing the highest form of technical education all over the country, this Council is of the opinion that higher technical education should be under the directive of the Council both for the promotion of efficiency of standard and for efficient maintenance of higher technical institutions and with this end in view the Council request that nec necessary funds be provided by the Central Government for the next five years at least."

In moving the resolution, Sir Lakshmnaswamy explained that it was not the intention of the Co-ordinating Committee that the Council should exercise executive control over each institution as this must of necessity be exercised by the local authorities. The directive of the Council must of necessity be of somewhat different character. He thought that the Council which was the premier body in the field of higher technical education should exercise functions similar to those exercised by the National Medical Council and also perform certain advisory and consultative functions such as those performed by the Inter-University Board. If the standard of higher technical education were to be raised throughout the country and brought to a uniform level, some such central coordination and direction was clearly necessary. It was not so much a question of the Council assuming control, or the Central Government assigning certain controlling functions to the Council; it was rather that all the constitutents, i.e. the Provincial and State Governments, Universities and other autonomous bodies should come to an agreement about cooperating in all All India Scheme and should authorise the Council to assume responsibility for the organisation of higher technical education, so that all the institutions in the country might be brought up to a uniformly high level and there should be no disparity in the qualification of candidates passing out from different Institutions. Neither the autonomy of the Universities

nor of the Provincial Government would in any way be affected. The Boards of Studies which had been set up by the Council could function far more effectively on an all India basis than could any one organisation set up by an individual Institution or an autonomous body.

Sir A.L. Mudaliar thought that if this resolution was accepted by all conerned, every Institution in the country should be visited by special visiting committees and the institutions advised in the matter of necessary equipment, staff, etc.

He also spoke about the All India Diplomas. He said that in order tofacilitate interchange of students between provinces, there should be some specified degree or diplomas which all the Provinces would honour equally. With this object in view, the All India Council had introduced All India Diplomas in order that these Diplomas might be recognised by all, it was essential that the various degree standards obtaining in the differenet parts of the country be examined and the particular Universities and Institutions advised as to what they should do to bring up their standards to a par with the All India or National Diploma. This standardisation would also facilitate the selection of students belonging to different Provinces for admission to the proposed Higher Technical Institutions.

The above resolution was then put to vote and was passed with only three dissentients.

It was, however, recorded that the Council had no intention of encroaching on the autonomy of the Provinces or Universities in the matter of the executive control of technical ~~institutions~~ institution.

Item VII.

To receive and consider a note on the constitution and activities of the All India Boards of Technical Studies (Annexure X).

The Committee endorsed the views expressed by the Co-ordinatin Committee under item III of the Committee's agenda.

It was also decided that the All India Board of Technical Studies in India Board of Technical Studies in Engineering and Metallurgy should set up a Small Sub-committee to draw up a scheme for education in Marine Engineering and for Navigation.

Item No. VIII (a) and Item No. VIII (b).

VIII (a) To consider the request of the Government of Mysore and the Indian Institute of Science that the proposed Southern Higher Technological Institution be located at Bangalore (Annexure XI)

*/22-TC/46 dated August 13, 1946 and

VIII (b) To receive letter Nos. 1170. XXIII/22TC-1946 and 1248 TC/XXXII/ November 8, 1946, respectively, from the Government of the United Provinces and to make recommendations in regard to the following questions raised therein:--

(1) Location of the proposed Northern Higher Technical Institution at Roorkee instead of at Cawnpore with the Thomason College of Engineering as nucleus.

or alternatively,

exclusion of engineering courses at the Institute if established at Cawnpore.

(2) Grant by the Central Government for the proposed University at Roorkee. (Annexure XII).

The Council agreed with the views expressed by the Co-ordinating Committee that the question of location of the Southern and the Northern Institutions required to be looked into more closely and that in so far as the Institution for the Southern Zone was conerned, the proposed sub-committee of the Co-ordinating Committee consisting of Sri A.L. Mudaliar, Sir J.C. Ghosh and Major D.L. Deshpande should be asked to submit a report to ~~be~~ the Co ordinating Committee after the official views of the Provincial and State Governments in the Region had been ascertain. The Sub-committee was given the power to coopt additional members, if necessar.

~~The~~ In the matter of the Northern Higher Technical Institution, it was resolved that the question of location of the Northern Higher Technical Institution should be taken up at a later date and the Government of U.P. among others should be consulted.

Item IX.

To consider the request for representation on the All India Council for Technical Education of the

(1) Eastern States,
(2) Indian Chemical Society, Calcutta and
(3) The Central Board of Irrigation, Government of India.

(Annexure XIII

The Council agreed with the Co-ordinating Committee's recommend-ation that the Indian Chemical Society should have a representative on the Council and that the Central Government might consider the inclusion of a representative of the Central Board of Irrigation and Central Technical Power Board amongst their nominees.

The Council agreed with the Co-ordinating Committee that the question of representation of the Eastern States on the Councils should be considered at a future date when some Technical Institutions had been actually started in these States.

It was resolved that the Government of India be requested to enlarge the All-India Council for Technical Education by the inclusion of one representative of the Indian Chemical Society.

Item X (a) and (b)

(a) To report that the Depatment of Industries and Supplies have been requested to grant representation to the All India Council for Technical Education on the General Council as well as on the Divisional Councils of the Indians Standards Institution recently set up by them. The request will be considered by the Gneral Councul of that Institution.

X(b) To report the appointment of Major D.D. Deshpande, Principal, Engineering College, Travancore University, as a representative of the All India Council for Technical Education on the Sub-committee on Training of the Central Employment Advisory Committee set up the advise the Director General of Resettlement and Employment.

was decided to record the above information.

Item XI.

Any other business including ~~matters~~ which may be referred to the Council by the Co-ordinating Committee.

Attention was then invited to the following resolution which the Co-ordinating Committee had passed at its third meeting.

"This Committee is of the opinion that in view of the introduction of All India Diplomas, Certificates and Higher Diplomas it is desirable that the Inter-University Board should be acquainted with the Proposals and that the Board should be requested to consider the desirability of reviewing the position of technical education in the Universities. The Committee resolves that a memorandum

be prepared and sent up to the Inter-University Board with the request that it may consider the desirability of appointing a committee, with which a small sub-committee of the All India Council for Technical Education may cooperate, in drawing up the general principles to be observed in regard to technical education for the degree courses of Universities."

In commending this resolution, Sir A.L. Mudaliar said that as one representing the Universities he felt very strongly the necessit for immediately setting up the joint Committee proposed above for the mutual benefit of the Council as well as the Universities. The standard of education between Universities themselves varied a great deal not to sepak of the variation which existed between University Institutions and some of the non-university institutions. The Council. which by common consent was the premier body in the field of technical education, could give valuble suggestions in the matter of the content of technical education, with a view to making it satisfy the requirements of industry and also in the matter of staff and equipment. Moreover, once the University authorities were fully acquanited with the purpose of the All India Diplomas Certificate schemes, they would see for themselves that the Diploma schemes were not a competitive system of education but were complementary to the University education. Moreover, when the Regional Higher Technical Institutions were established, it would be necessary to provide for the free flow of students from one type of institution to the other both for research and for higher studies. There was, therefore, a necessity for correlating University degrees on the one hand and All India Diplomas and Certificates on the other. The Co-ordinating Committee had directed the Boards of the Council that in framing the syllabuses and holding examinations, All India Diplomas must conform to degree standards. It was explained that the Diplomas as distinct from degrees had three important features.

(i) The curriculum and syllabuses of studies were not regidly laid down as in the case of those for Universities. They could be altered to suit the changing requirements industry.

(ii) InUniversity courses, emphasis was laid on the academic side whereas in the All India Diplomas Schemes, exphasis was more on the practical side of the subjects.

ii) The schemes were being so designed that there remained a certain amount of flexibility in regard to conditions for qualifying for the Diplomas, so that any one ~~engaged~~ in full or part-time occupations could undergo the courses and improve his prospects. Both degrees and Diplomas were of equal standard and there was clearly room for both in a national system of education. In fact, it was imperative that both systems should proceed side by side.

In reply to an enquiry as to whether diploma-holders would be allowed to sit for degree examinations or <u>vice-versa</u>, it was explained that this would be a matter for the joint Committee of the Universities and the Council to decide.

The resolution was passed.

The Hon'ble Minister for Education, Bengal, said that from his experience and from what he had seen and heard during the d eliberations he was convinced that it was necessary for the Central Government ot set up a high level Inter-departmental committee to expedite development programmes for technical education which the Central Government had already accepted in principle. He moved the adoption of the following resolution which was supported by the H'n'ble M,nister for Education, Sind.

"The Council recommends to the Government of India that for expediting execution of the schemes recommended by the Council and approved by the Government of India, a committee consisting of the representatives, preferably Secretaries, of the Education, Industries & Supplies, Finance, Works, Mines & Power and Labour Departments be set up with the representative (preferably Secretary) of the Education Department asigning Secretary for taking such actions as are necessary for giving effect to the approved schemes after drawing up a definite time-table in respect of each scheme, the Council being kept informed of the programme as well as the progress in respect of each scheme."

Sir John Sargent explained that the progress of all Central Development Schemes was being watched and looked after by the Development Board on which most of the Government Departments were represented through their Secretaries and expressed the hope that the Council and the Hon'ble Member moving the resolution would not be disappointed if the Government could not given effect to the resolution as it stood. The Council appreciated the point of view expressed by Sir John Sargent but decided to pass the above resolutio

Members then spoke in warm appreciation of the hospitality which they had received at the hands of the Government of Mysore and the following resolution was passed.

"The Council places on record its sense of gratitude to the Government of Mysore for the cordial welcome and generous hospitality extended to them and thanks the officers of the State, particularly Mr. D.S. Venkanna, for the excellent arrangements made for the member and staff of the Council."

Sir John Sargent expressed on behalf of the Secretariat of the Education Department their thanks to the Officers of the Government of Mysore, specially to the Director of Public Instruction and other staff for the assistance which they had given to the Education Department Secretariat in organising the meeting of the Council in Bangalore.

A vote of thanks was also accorded to Sir J.C. Ghosh and the members of the Indian Institute of Science for making all arrangements for holding the meeting of the Co-ordinating Committee at the Indian Institute of Science.

The meeting then terminated with a vote of thanks to the Chair.

ANNEXURE I.

Speech delivered by Sir A. Ramaswamy Mudaliar
Dewan of Mysore. at the opening of the meeting.

Chairman and Members of the All-India Council for Technical Education, it is my duty by command of His Highness to welcome you to this city and to convey His Higheness' appreciation that it has been found possible for you to accept our invitation to hold the second session of your council at Bangalore. But Ladies and Gentlemen, no command could have been more pleasantly laid upon me than this one of welcoming you all to this Conference. Here I see many fellow colleagues, many friends whom for years it has been my pleasure to be associated in work with and then the pleasure that I feel in welcoming you on behalf of His Highness all the greater when I think my own personal association with most of you for a long period of years and in comparatively difficult times too.

The All India Council for Technical Education is the result I understand, of the recommendations of the Central Advisory Board of Education and the Government of India decided to establish this Council to comprise amongst others all the Provinces and such States as may wish to join. Mysore comes under "such State" but the fact that it has extended its invitation to you for your very second session indicates that though it may be one of "Such States", it will be the very first state to co-operate in this great endeavour and to join you completely in trying to meet one of the greatest needs in our country- the establishments of proper Technological Institutions- and the training of technical personnel.

During the war years, it was to a certain extent my concern to see that skilled and semi-skilled people were trained in large numbers for the ever-growing industrial establishments of our country. I need not go into the histroy of that experiment which was for the first time adopted by the Government of India, nor the welcome subsidy that the Government of India paid to various industrial establishments to enable skilled and semi-skilled workmen to be trained. It was then found that the human material available in this country was so good that with short training period of 6 to 9 months at the most, most of the skilled workmen required for the Ordinance Factories, where I understand the degree of accuracy in Worksmanship was about 1/1000 of an inch, could be produced from this material.

But there was one defect which we could not make up, one deficiency which could not be covered with any amount of training which was possible to organise during that short period. While we were able to train skilled and semi-skilled people, we were not able to produce the officer type, the Foreman, the Chargeman, the Assistant Foreman, who could fune these industries as Supervisor and Superintendents of skilled and semi-skilled men. We had to import a great many people and it was not easy to find imported material either, during the very strenuous period of war when the demand for such peronnel was everywhere actuely felt. I think some of these consideration were brought to bear on the mind of the Government of India at the time and I believe that this attempt to regulate and organise technological education and to establish non-Technological Institutes where such kind of people can be trained; is the result of the experiences during the war period.

As I have said, Mysore will be ready to co operated in any sucn endeavour whole heartedly, to join in any scheme which may bring into existence a regular corps of people who will play, and are destined to play, a greater part in our industrial expansion. Private endeavour has done very little to train such people in this country. There has been a haphazard attempt at best to train such personnel in our various private industrial concerns. With the history of educational movement in this country, particularly in commercial and technical subjects, one need not be surprised that private endeavour has not been able to do more and that Government should come foraward realising the need for such personnel and taking into account the industrial expansion that is

is coming about and is bound to come in the near future I believe, that is the right course that has been taken by the Government.

I do not want to anticipate what your Chairman has to say, indeed I am not qualified or competent to do so, but as I see that problem it is this. We have in a way a Technological Institute in Bangalore, an occupational Institute as it is called, describing more vividly and graphically the purpose for which it has been started to find occupations and occupations of technical cadre.. We have a programme of establishing more such Institutiions. In fact it has been decided that two more Institutes of this kind, probably not so complete, but still to a great extent serving the same purpose, will be established at two other centres in the State of Mysore- one in the Mysore town itself, and one at a place on the borders of Mysore and Bombay Presidency. But these are again for more or less skilled workmen and a certain type of higher skilled people who may be in a position to train skilled workmen. What is required exactly, as I said, is supervisory class-officer class- which, while in a position to do skilled work itself is also in a position to get the work out of the skilled men.

I understand that your deliberations include the consideration of the establishment of High Grade Technological Institutes in this country on the lines of the Massachusetts Institute of Technology an Institution known all over the world where technology is studied and where the advantage of training in technology is appreciated. There are other Institutions in Europe which though not as famour, are equally useful. I remember seeing the Polytechnic in Brussels in Belgium, a small country in size and population, much smaller than Mysore in area and about the same in population, having a Polytechnic of which any country as big as India may be proud and I trust it will be possible to have these Technological Institutes established as quickly as possible in this country.

But the personnel for staffing these Institutes may not be readily available and I trust there will be no objection whatsoever from any quarter to get trained personnel from wherever we can for staffing these Institutes and for giving training to our men. Self-sufficeincy is so often heard in so many connections that some times I fear that we may overdo this idea of self-sufficiency to our own detriment, if not possibly to our complacency in some matter.

After having established these Technological Institutes, if, as I believe, it is the desire of this Council and of the Government is to see that a corps of officers and supervisors are trained who can be recognised all over India as adequately qualified holding certificates of the Council it seems to me that the Council has got all its work cut out before it could bring about that result.

The proper selection of examiners is one of the most important things if the certificates that the Council issues, or the certificates that are issued on behalf of the Council are to be accepted everywhere and I trust that the Technological Institutes will come into existence shortly and in the meanwhile students from different places will be permitted to sit for examinations to get these Certificates which will be acceptable all over India by a proper system of examination, the examiner appointed having the confidence of all the Provinces and State Governments.

I do not want to go into more of the details of this question on which I have already siad enough and I have very little knowledge of the subject. I only watch the course of discussion as they appear in the very meagre from in the newspapers becuase these mundane subjects are of little interest to readers to today

but I venture to think that if we want to progress and if we want our political institutions safely established, working for the purpose for which they are intended, the raising of the standard of living is the first essential objective. No political Institution in the country, beleive me, can work satisfactorily, no political institution can be of permanent benefit to the country or even in itself of a permanent character without those voilent changes that come about from time to time, as we have witnessed in many countries, unless the basic foundation of a contented people having a proper standard of living is assured in that country. The economic safety of the vast masses of the people their economic security their standard of living, is the foundation on which all political institutions rest and while I do not want in any way to make any reflection of any kind which will degress me from my purely non-political speech today, I only wish to state emphatically what important part this Council will have to play if by its endeavours, by its deliverations, ~~by its deliberations~~, but its resolutions, bit bring about a state of affairs which will ensure industrial expansion and development of the country and contribute to a higher standard of living for our people. I think it will be playing a great part in ensuring that independence which we all now realise has come and far more important still in ensuring that the independence when it comes will stay and will make ourselves continue to be independent. But believe me it is easy, comparatively speaking, to get what you want, it is much more difficult to retain it when once you get it. I have, therefore very high hopes of the work of this Council in ensuring the greatest benefit to the country and I trust within the next year or two its advisory functions will translate themselves into executive functions, into functions where policy can also be laid directly and where Governments overworked with a hundred and million other things having no time to examine those policies carefully or in detail will accept the advice of this Council on Tehhnical Education for All India both on policy and in actual practice. I venture to hope that within the next few months, as your work progresses, whatever may be the political characteristics of the country, all parties of India will look to you, to your Institutes, to your deliberations, to your policy-making and ultimately to your activity and join you at least in this matter with out exception whatsoever.

Ladies and gentleman, I have very great pleasure in welcoming the representatives and delegates of the Council to this Conference and wish them a very pleasant stay.

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APPENDIX II.

Address by Mr. N.R. Sarker, Chairman of the All-India Council for Technical Education, delivered at the second meeting of the Council at Bangalore on 29th May, 1947.

On behalf of the members of the Council and on my own behalf I should request you, Sir, to convey our deep thanks and sense of gratitude to His Highness the Maharaja of Mysore for inviting us to hold our meeting in this beautiful city. I also thank you and your Government for the Cordiality with which we have been received and for the excellency arrangements so kindly made for the members of the Council. Bangalore has, in a way, been a very appropriate venue for our meeting. The progress of scientific research and higher technical education in India owes not a little to the pioneering efforts of Mysore State which fostered industries, technical education and scientific research with great vision and munificence, while these subjects had purely academic interest for administrations in other parts of India. The key industries at Bhadravati, the generation of electric power at the Cauvery and the Jog Falls are examples of efficient state management which evoke the admiration of even the strongest champions of private enterprise. Last, but not the least, Nobody in India would, I believe, be able to ignore the contribution made by the Indian Institute of Science at Bangalore which owes its origin to the munificence of the House of Tata and is supported by the Mysore State and the Central Government. It would not also, perhaps, be out of place here to recall that it was during the time when you, Sir, were in the Government of India, that the move for the scientific and technical research was first taken, at your instance, and a Council of Scientific and Industrial Research established which is fraught with immense possibilities for the good of India. It has therefore been to me a source of particular pleasure to have you associated with the opening of our deliberations here. I thank you most sincerely, Sir, for having welcomed us so cordially this morning.

The role of science in modern world is rather confused. On the one hand, science has evolved atomic power, shining malevolently in its crown, and, on the other dialetically enough, it has great and lasting achievements in the service of humanity and the development of the arts of peace. For example, in the last Great War science has been utilised to an extent which staggers our imagination in perfecting the weapons of death and destruction. At the same time, it has also in the midst of the War made great and valuable contribution in alleviating the miseries of mankind. To give but one example: Medical Science during the War was so fully developed that it was responsible for bringing the Army's death rate from 14.1 per thousand in the last War to 0.6 in this. These are two contradictory manifestations of science which have puzzled men in every generation and clime. The question that naturally arises is, how in the midst of these conflicting ends Science can make its maximum contributions to the welfare of Society. This is impossible without a re definition of the role of Science in Society. True Science has little to do with war. The problem is how to break the periodic and death-dealing subversion of Science to war, how to shape this superb instrument, built up out of the finest creative ability of mankind, to the conscious ends of peace.

One way of doing it is to harness the power of science to the material development of nations and thereby raise the standard of living of the people to a much higher level than now. Such development should not be restricted to a few countries, as at present, but should be diffused all over the world. In particular, conditions of living should have to be upgraded beyond recognition among the underdeveloped countries, like India and China, which between them contain about half of the work's population. The *sine qua non* of such development is the existence of a large body of specialised knowledge and technical skill. In helping to spread

such knowledge and skillamoung the underdeveloped countries of the world we would be enabling science to play its beneficient role as opposed to the destructive one which it has so unfortunately played with a periodic repetition.

That the creation of a body of technicians may well be regarde as a condition prededent to swift and rapid economic development is amply borne out by the history of those countries which have reached a commanding position in the sphere of economic development. I may be permitted to reproduce a few salient facts from the economy of the leading industrial nations to show this necessary and invariab connection between economic development and technical education. In Germany the study of applied chmistry was mainly responsible for the magnificent development of her chemical industries. In Belgium the promotion of industries in many spheres was preceded by important experiments in technical education. England somewhat lagged behind other countries in the development of technical education although her industries developed at a very early stage. The consequence of this was felt keenly during the last war, which proved the existing faciltities of technical education in England insufficient, both qualitatively and quantitiatively, to meet the colossal needs of global war. It was due to this growing realisation that the Percy Committee was appointed in 1944 to consider the needs of higher technical education in England and Wales. The system of technical education in Great Britain is being reorganised according to the recommendations of this Committee which expressed the apprehension that the position of Great Britian as a leading industrial nation was being seriously endangered by a failture to secure the fullest possible application of science to industry. In particular, the shortage of competent managers was a serious threa to the war effort and the post-war production drive in England is equally d ependent upon a supply of really good managers. The recruitment to managerial posts is, however, being accelerated by an important recent development, viz., that promotion to managelal grades is coming to depend more on merit and less on the ownership of shares or relationship to the proprietor. The change is, of course, still not complete but it is hoped that the process will be accelerated in course of time and thereby widen the field of recuritment to managerial posts.

Soviet Russia offers an illuminating example of what a nation can achieve in the sphere of economic development by stimulating scientific research and technical education. The implementation of a technical personnel plan was an integral part of the economic plan and was carried on simultaneously with the other parts of the plan, as would be evident from a few figures I am citing presently. At the inception of the first five-year plan the Soviet industry as a whole had at its disposal a staff of technical personnel numbering 58,000. This figure was continuously raised under the successive five-year plans until in 1939 it reached the impressive figure of 9,590,000 out of a total population of 170,000,000. In other words, the managing and higher technical staff of Soviet economy before the war formed about 1/17th of the total Soviet population. No wonder that people are beginning to talk of a ma nagerial revolution with regard to Soviet Russia. Further, one of the reasons why Russia could so successfully face up to the facist agression is the wide diffusion of scientific and technical knowledge which enabled her to increase the war potential to unprecedented proportions.

In the case of the U.S.A., again, it is largely due to the great attention devoted to research that U.S.A. manufacturers have been able to originate and develop so many new products within recent years. Throughout the period 1939-39 U.S.A. industry alone devoted something of the order of 6% of its income to research, to saxy nothing of the expenditure made by research and technical institutions otherwise maintained. But all this pales into insignificance before the tremendous fillip given to scientific research and development during the four years of war. Abou 10 billion of U.S. funds have been spent on scientific researcl

during this period and the figure symbolizes the most intensive and extensive use of science by government in any equal period of history. While the bulk of these researches were intended to serve the cause of the U.S. war-efforts, it is certain that much of it would go down to post-war years and add permanently to the cultivation of the arts of peace

Coming nearer home, we find that Japan began its modern development half a century behind India but nevertheless outstripped the latter in the race to become the most important industrial country in the East by reason of her systematic efforts to extend facilities of technical education.

It would be evident from this brief resume, however incomplete, that the provision of technical education in order to train the necessary technical and managerial personnel is one of the fundamental conditions of economic progress and that even the advanced countries of the world, with ample facilities of technical education already in existence, are making renewed endeavours to enlarge these facilities. Judged from this angle, the need for the creation of these facilities in under-developed countries like India must appear self evident. Indian scientists have no doubt made brilliant original contributions in a number of branches and acheived world wide fame and renown. The names of Ramud and Bose are outstanding in the older generation, but they have also an ever-increasing number of successors in our own times. The results of their research have also been of considerable aid to Indian industries. Nevertheless, it remains true that these researches have not been fully and proerly correlated to the needs of industries due mainly to the efficiency of facilities of technical education in our country. This was fortunately realised by the Government of India in recent years which held the view that the most serious bottleneck to the implementation of a plan of economic development would be the inadequacy of technical personnel and not finances as is usually believed. This awareness on the part of the Government of which Sir Ardeshir Dalal was the planning and reconstruction member at the time, led to the formation of an ad hoc Committee, consisting of scientists and businessmen, with a view to advise on the provision of higher technical educational facilities in India. The Committee submitted their interim report recommending the establishment of not less than four Higher Technical Institutions in different parts of India which would serve as models for scientific and technical education, particularly of a very high order. Of them one will be in the North, one in the East, one in the South and onein the West. The Eastern Institute was to be set up first, in or near Calcutta, while the establishment of the Western Institute, in or near Bombay, should be taken in hand concurrently or failing that as soon after as possible. Calcutta and Bombay were suggested for the location of the Eastern and Western Institutes respectively becuase of the existence of big industries in these areas. In the meanwhile, the All-India Council for Technical Education was set up by the Government of India with three primary objects in view viz. (1) to survey the whole field of technical education in India, (2) to consider the desirability of establishing high-grade technical institutions on the lines of the M.I.T. and (3) to promote inter-provincial co-ordination in All India schemes of technical education. The All-India Council endorsed the recommendation of the ad hoc committee and the Government also, it is understood has accepted this recommendation. With a view to achieve co-ordination the Council has also set up six All-India Boards of Technical Studies in Engineering and Technological subjects. These Boards, consisting of experts drawn from all over India, are engaged in drawing up syllabuses of studies and evolving sound methods of teaching and examinations.

While recommending the establishment of a fiew highgrade technical institutions the Council at one stage of its deliberations was confronted with a somewhat different view regarding the advisability of establishing immediately such technical institutions. This view, quite good as it is, states that facilities for technical education should be improved and extended by strengthening the existing institutions and that no new institute should be established without first conducting and completing a detailed survey to ascertain

precisely the needs and requirements of industries. As regards the first, I may mention that the question of strengthening the existing technical institutions is bound to enagage the serious attention of the Council. The existing basis must receive all the care and attention it deserves, since they are as yet the only means to meet the current demands for technical personnel. As we all know, visiting Committees were appointed by this Council for important technical institutions of every region with a view to determine the facilities available in these institutions, to ascertain their needs and bring the systems of training to a certain standard. These Committees have submitted their reports and these will be considered at this meeting of the council, whereupon adequate grants will be recommended by the Council to the Government for distribution among these institutes.

On the question of making a detailed survey with a view to determine the needs of industries, there can, of course, be little controversy. If schemes of extending technical facilities are undertaken without regard to actual needs, facilities may be far in excess of needs and, it is contended, the recruits annually turned out may fail to be absorbed in gainful occupations for lack of commensurate expansion of industries. All this is no doubt true but when the detailed and comprehensive survey of a vast country must necessarily take some time to be completed, thisshould not be allowed to prevent a beginning to be made in the direction of providing such facilities. Taking, for example, the case of India it can be pointed out that facilities for technical education in this country are so meagre and insufficient to meet even the existing demands that the establishment of a few tehhnical institutions before the survey is completed can never be regarded as leading to a surfeit of such facilities. The plans of hydro-electric development, road-building projects, irrigation and agricultural improvements and various other plans lying ready in the archives of the Governments, both Central and Provincial, would require a large body of technicians. It has been estamated by a British Engineering Journal that the schemes of water-power development along would need 20,000 techncians. These are only the needs of Governments in some of their departments. There are also the growing volume of requirements of private industries to be satisfied. All these would clearly show that the establishment of a few technical institutions immediately, as recommended by the Council, can by no means be regarded as creating a condition in which the annual number or recruits trained by these institutes exceeds the annual intake of industries, even as we can visualise the latter's needs in a rough and ready manner. Further, in a matter which concerns the education and training of individual human beings, adjustments of supply and demand should be made within wide tolerances. While it may be feared that the creation of new technical facilities may lead to unemployment if they are in excess of existing needs, it is euqlly plausible to argue that in the case of a growing and newly developing country the presence of these technicians may act as a spur to development, thereby creating their own conditions of work and employment. In the present condition of India, of course, there can be no question of the supply of technicians outrunning demand. In the future scheme of things also the status of technical and managerial personnel will arise, as finance loses some of its dominating role.

I may here refer to a prevailing notion about the import of foreign technical skill and industrial "Know-how" from abroad to meet India's demands. We shall, no doubt have to depend on foreign assistance in many spheres at the initial stage since we have at present very little technical force of our own. But the possibility of any large-scale import of foreign technical experts must be ruled out at present and this for two reasons. In the first place, there are the calls of reconstruction in Europe and elsewhere and the enormous industrial and governmental undertakings contemplated in Europe and America to provide full employment. Already a shortage is being felt in thes countries of high- grade

technical personnel and efforts are being made to meet these shortages It would be difficult, if not impossible, in these conditions, to secure the services of technical personnel from abroad to the extent required by India. Further, wheatever services may be available a tendency has been recently at work for foreign technical experts to demand apart from extortionate prices, a controlling influence in the concerns for which their services are required. This is all the more reason why India should build up her own higher technical force as speedily and expeditiously as possible.

But although it has been given to understand that the recommendation of this Council to establish at least one or two institutes immediately, has been accepted by the Government there are not sufficient indications to show that the Government is moving in this matter as speedily as the urgency of the task demands. It is only natural for the Council to expect that those of their recommendations which are accepted by the Government should be implemented as speedily as possible. But the rate of porgress, I am constrained to observe, is not what we all want or desire. can, of course, realise that we are at present passing through a transitional phase during which everything seems to be in the melting-pot. In the midst of the reigning inevitable in a transitional period, it is difficult for any government to proceed with its developmental work with the speed and vigour usually expected of it; everything appears to be deferred to that elusive future when India would attain to some kind of equalibrium in the constitutional sphere. There are besides a number of controversial questions occupying the Government even at this stage, further delaying the work of providing facilities for technical educations. The outstanding amoung these questions are whether industries will be run on the principle of complete nationalisation, whether nationalisation should be on a selective basis, covering the key industries. The failure to reach a definite and clear-cut decision on these questions has introduced uncertainties and the Government is not yet certain about the nature of its industrial policy. But to me all such questions appear to be not strictly germane so far as technical education is concerned. Whether there is nationalisation on a comprehensive scale or on a selective basis this fact stands out that the creation of a large body of technical personnel is a basic necessity. If this personnel is created sufficiently well in advance, the Government, of whatever complexion it may be, would be able to utilise this force in implementing its plan of economic development. I would, therefore, appeal to the Government that in spite of the difficult times through which they are passing they should bestir themselves and take all possible steps necessary for building up facilities of higher technical education.

I may be permitted to refer to another point in this context which conerns not only the present but also the future of technical education. The air is thick with rumours of decisions and partitions, of separate sovereign states and a host of other fissiparous tendencies. This has, again, introduced further confusion and uncertainties. But here too, whether there are divisions and partitions or separate sovereign states or a loose union of the type provided in the Cabinet Mission Scheme, the task of creating the machinery for the provision of technical education may well be conducted on a basis of co-ordination between the provinces and states. For this is a task too vast for a single province or state to undertake in a satisfactory or comprehensive manner. An All-India service of technical education would minimise cost by avoiding waste and overlapping. The necessity is also too abiding and permanent to be influenced by every passing wind of politics. This whole question of technical education deserves to be lifted to a higher plan where considerations of politics or any other considerations will not hamper work in a sphere which is of equal urgency to all provinces and states alike.

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Office Assistant,
Madras Record Office.

27/4/54

NOTE FILE:

To U.S.

Notes of this department from p 5 cf. and also the remarks of E & P.H. department at bottom of p 6 cf. may be perused. The official report referred to at A on p 1 cf may be awaited till 15-8-47. This file may be circulated to H.M. (I) H.M. (Edn) for perusal as suggested at Y on p 6 cf.

The report of the Jt. Director of Industries on the 2nd meeting of the All India Council for Technical Education held in Bangalore on the 29th and 30th of May 1947 on pages 2-5 cf. is for perusal.

The statement at C on p 1 cf. does not tally with the contents of para 4 at pp 3 & 5 cf. of the report.

To U.S.

With reference to B above a draft reminder to Director of Industries and Commerce is submitted below for approval.

(Issued as Memo No. 54599 DI/47-2D- 19-8-47.)
(From the Director of Industries and Commerce No. 1187 d/5-9-47)

To U.S.

Please see B above

The Official proceedings of the second meeting of All India Council for Technical Education held at Bangalore are submitted for perusal.

So far as this department is concerned no action seems called for on the points covered by the official proceedings.

E & P.H. Department may see the proceedings in regard to the correspondence which they had with India in respect of the setting up of Regional Committees for Technical Education by India and the introduction of all India Standard in Technical Education That department has also under consideration the proposal of the Government of India to set up a Higher Technical Institute in the South and recently some discussions between the H.Ms (Edn & Industries) and the concerned Heads of Departments took place.

E.P.H.

May be perused and returned to Dev. U.O. with the request that the file may also be circulated to H.M. (Edn).

To. A.S. Dev.

Notes above may be perused. With reference to the remarks of E. & P.H. department at A above the file may be circulated to H.M. (Edn).

The Official Proceedings of the second meeting of the All India Council of Technical Education held at Bangalore in May 1947. is submitted for perusal.

Dev.

To.A.S.

(Minutes of H.M. I) and H.M. Edn) above.)

The papers in this file may now be recorded.

G.O.Ms. No.4869, d/4-10-47.
Development,
Education- Technical - All India Council of Technical Education- Second meeting held at Bangalore in May 1947- Report - Papers Recorded.

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27/4/48.